

A Rash Overview of Tropical Skin Diseases (and other things)

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Insect bites



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Bedbugs



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Gentian Violet

- Very messy; stains
- Traditional “anti-infective” treatment, rarely used in USA today
- Gentian violet can be painted onto bacterial or fungal infections and left to dry

Many deep fungal infections can present as leg ulcers

- Sporotrichosis
- Blastomycosis
- Coccidioidomycosis
- Cryptococcosis
- Histoplasmosis
- Protothecosis
- Chromoblastomycosis



protothecosis

Chromoblastomycosis

Usually one lower extremity

Male Farmers

Fonsecaea pedrosoi



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Chromoblastomycosis

- Treatment is difficult
- Small lesions: surgical excision or LN2
- Itraconazole or Terbinafine



Below: fungal elements found in smear taken from ulcer



Lobomycosis (*Lacazia loboi*)

Acquired from soil,
water, vegetation
in forested areas

Recurrence
common

Amazonian
wetlands

Small lesions-
surgical excision

IMA
Itraconazole &



Sporotrichosis

- Nodules with lymphatic spread and ulceration
- *Sporothrix schenckii*
- ✂ Worldwide
- ✂ Itraconazole
- ✂ Potassium Iodide



Differential for sporotrichoid spread aka Lymphocutaneous syndrome

Sporotrichosis

Nocardiosis

Histoplasmosis

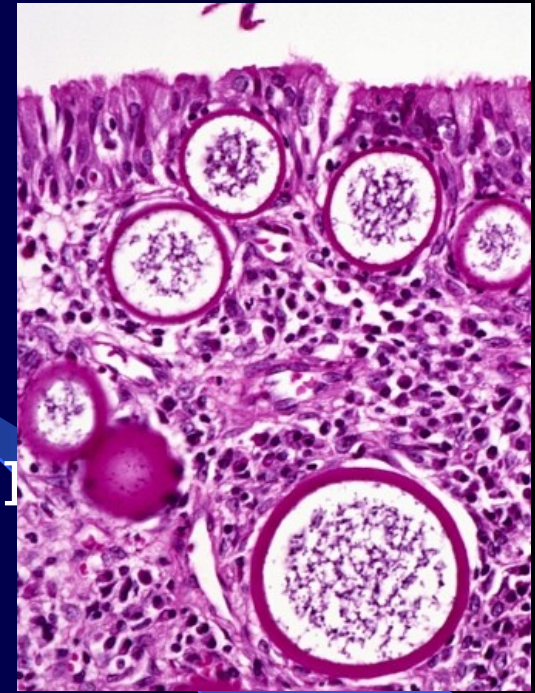
Tularemia

Atypical mycobacteria (esp *M. marinum*)



Rhinosporidiosis

- *Rhinosporidium seeberi*
- India, East Asia, Latin America
- Mucosal polypoid lesions
- Bleed easily



Rhinosporidiosis Treatment

- Destruction of involved area by excision or electrosurgery
- Antifungals are of little value



Basidiobolomycosis

- Entomophthoromycosis
- Indonesia, worldwide
- Indolent course
- *Basidiobolus ranarum*
- Subcutaneous



Basidiobolomycosis

- Biopsy diagnosis- broad, thin-walled hyphae, aseptate, branched at right angles
- Potassium iodide drug of choice. other Antifun



Humanitarian mission in Darfur

- Several men have similar appearing painless swollen feet



Mycetoma ("fungal tumor")

- **Madura foot, maduramycosis.**
- **Sites of minor trauma and exposure to decaying wood**
- **Foot/leg (75%), upper back**
- **Clinical triad of:**
- **Tumefaction, Draining sinuses, & Extruded grains**

Etiology and treatment

- **True fungal vs bacterial**



Mycetoma

- Progressive swelling with sinus tracts and grains
- Culture and Biopsy
- Actinomycetoma: PCN, sulfonamides
- Eumycetoma: Combo surgery and Antifungal therapy



Infestations and Cutaneous Ectoparasites

- Lice
- Scabies
- Tungiasis
- Cutaneous larva migrans
- Myiasis
- Cercarial Dermatitis

Head lice



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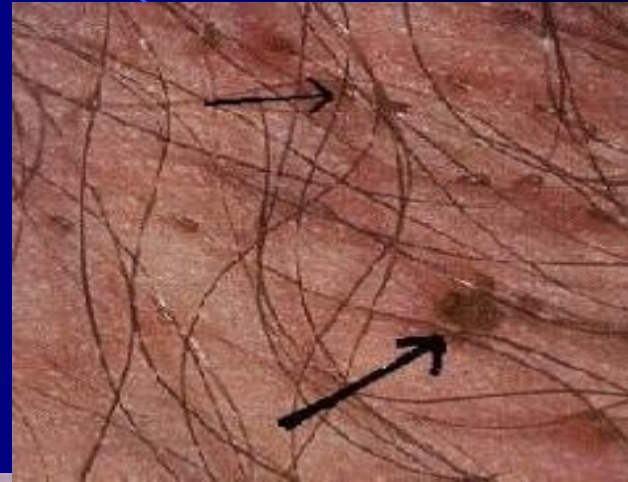


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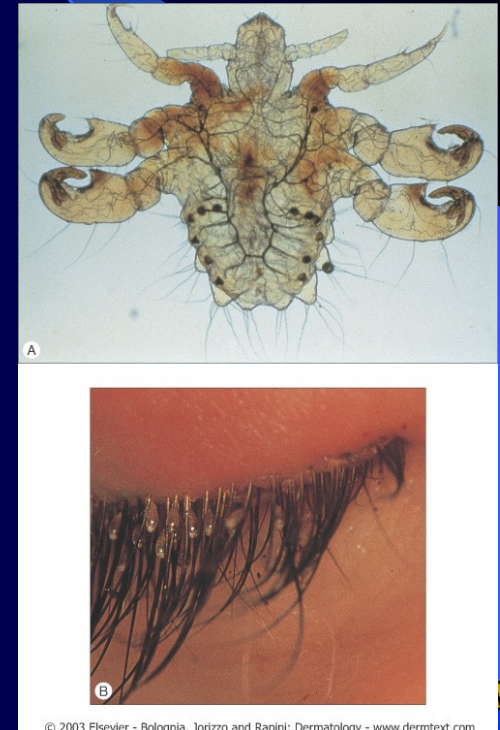
Pediculosis pubis (crab lice)

- Louse grabs hairs, bites skin, cements nits to hairs
 - Can be on any body hair, including eyelashes
- Look for other STD's



Pediculosis pubis

- Permethrin cream
- Coat eyelashes with vaseline bid



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Scabies

- Itching often worse at night
- Close contacts also itchy
- Papules and burrows: **w**webs, **w**rists, **w**aist and **w**illie

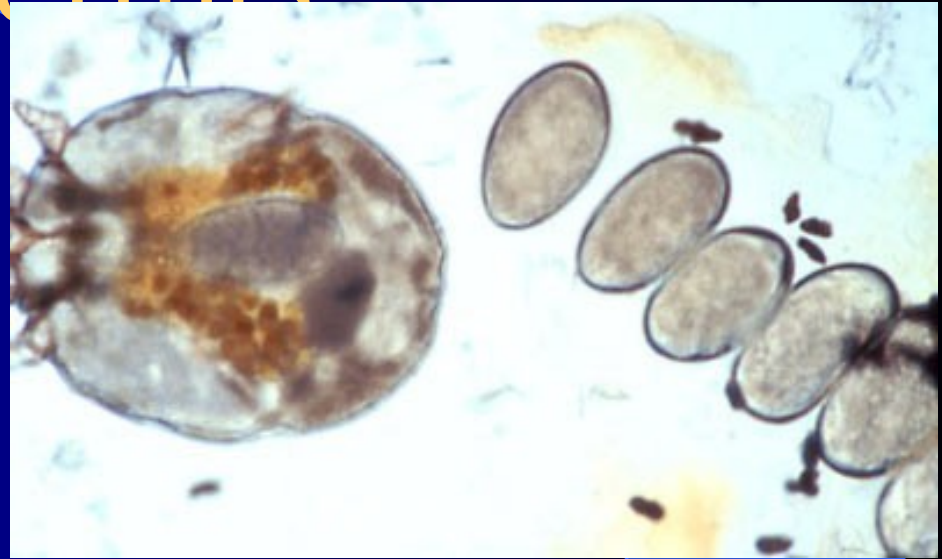


Scabies



Scabies mite burrows in epidermis

- Scrape to see mite, eggs, or poop



Crusted scabies

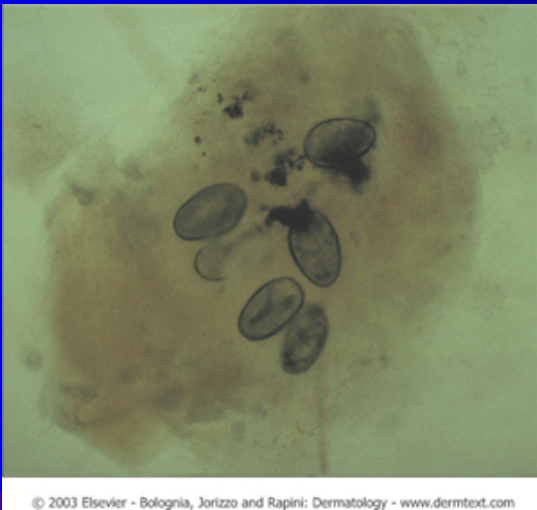
- Wear gloves !



Scabies



- *Sarcoptes scabiei*
- Treatments – permethrin, lindane, benzyl benzoate, crotamiton, malathion, topical sulfur, ivermectin



21yo soldier returns military exercise in Guyana



Tungiasis, Sand Flea (*Tunga penetrans*)

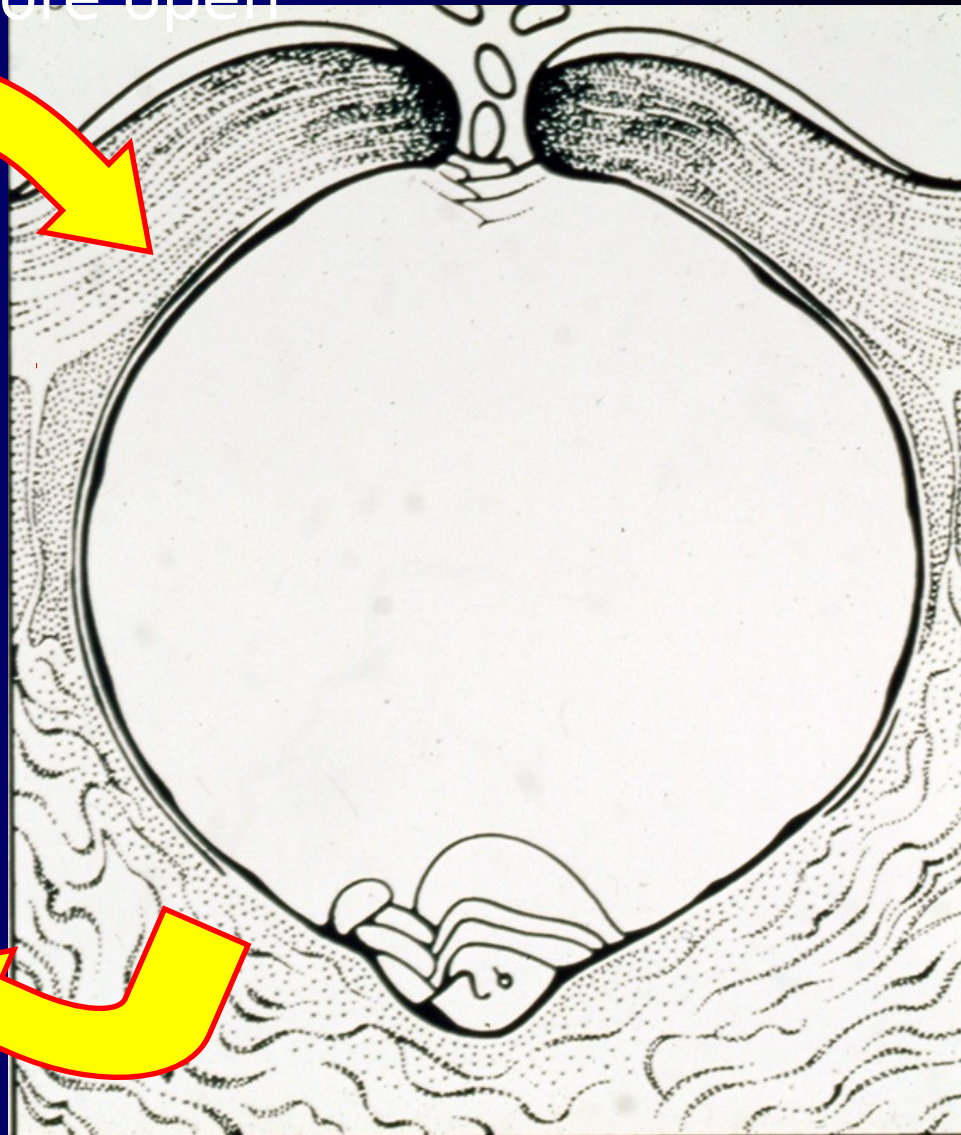
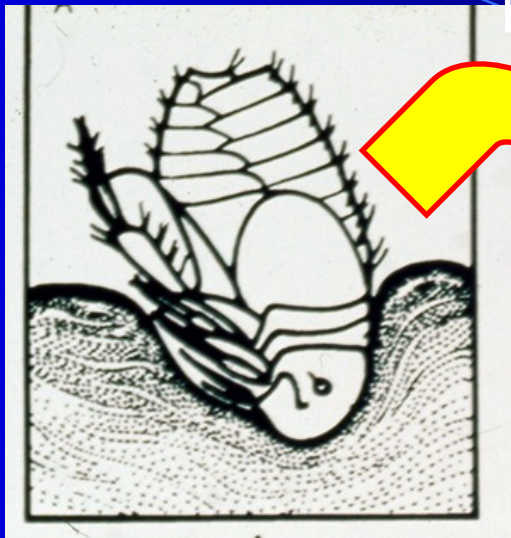
- Female burrows into skin (usually foot)
- Progression of painful red spot to papule to nodule with black dot (anal/genital area of flea) to pearl-like papule (with eggs) to black keratotic crust



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Gravid female burrows into flesh, leaving uterine pore open



Tungiasis



Tungiasis



- Life cycle of 2-4 mm flea is 5-6 weeks
- Infestation self-limited if not reinfected
- Rare osteomyelitis/gangrene
- Sub-Saharan, Caribe, Mexico, S. America
- Surgical removal of fleas

Tungiasis

- *Tunga penetrans*, Sand flea, jigger
- Painful
- Curettage or Excision, Topical ivermectin or thiabendazole, Oral thiabendazole for heavily infested

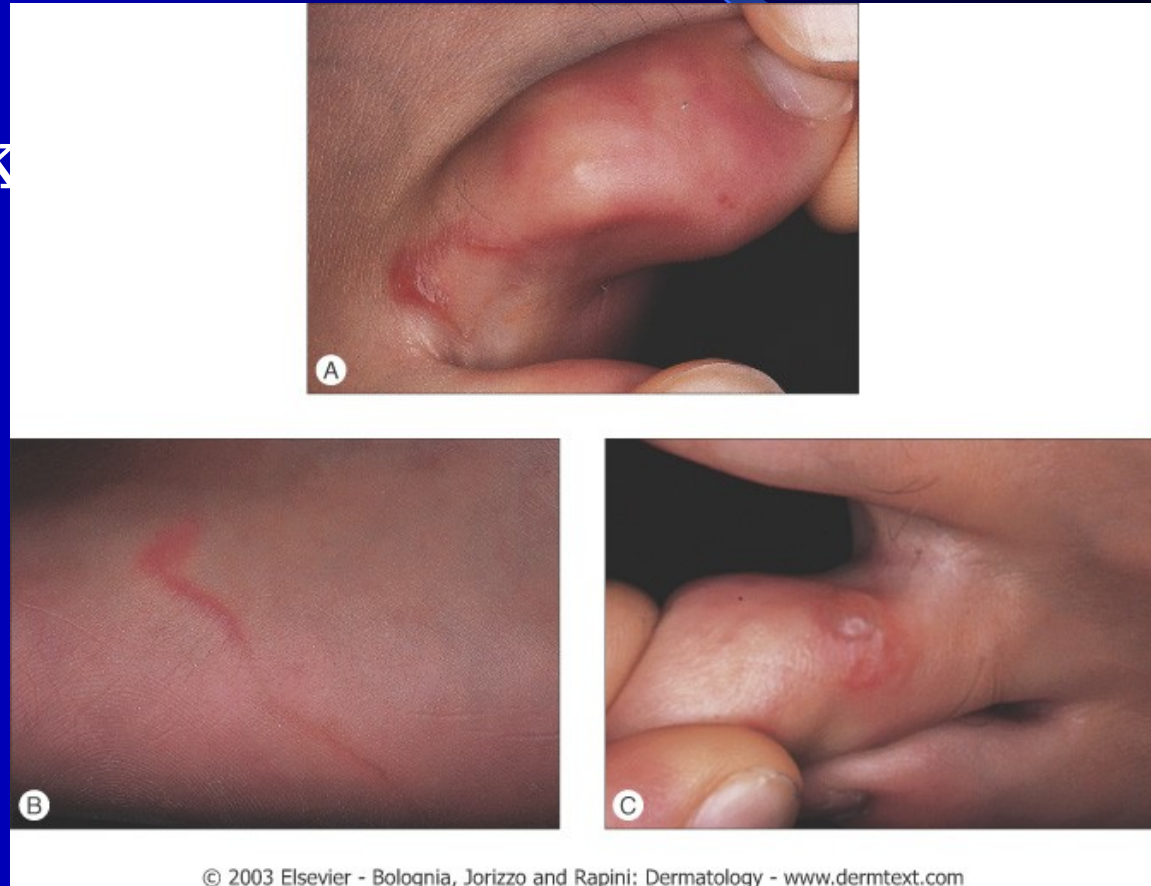


28yo Navy physician - at Flight Surgeon Course in Pensacola




Cutaneous Larva Migrans (Creeping eruption)

- Pruritic, serpiginous lesion migrates 2-4 cm /day on foot or buttock



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Creeping Eruption (Cutaneous Larva Migrans)

- Dog or cat hookworm larvae
- Beach; sandboxes
- Unlike human hookworms, dog/cat hookworms cannot penetrate fully and usually die within 2 months
- Larva migrates ~ 2 cm/day
- Course: self-limited 1-6 mos
- Rx: topical thiabendazole
-  or single dose of oral ivermectin



Myiasis

- Infestation of human tissue by fly larva



Myiasis



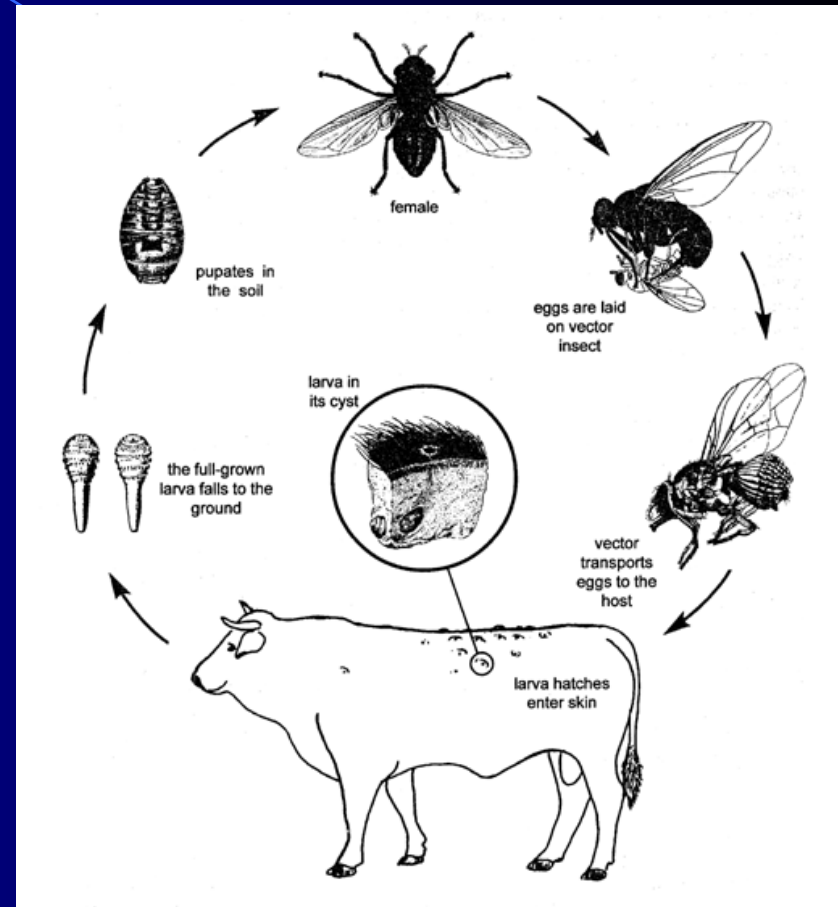
- Painful, boil-like lesion with central punctum (respiratory pore)
- Exposed skin
- “obnoxious infestations both medically and esthetically”

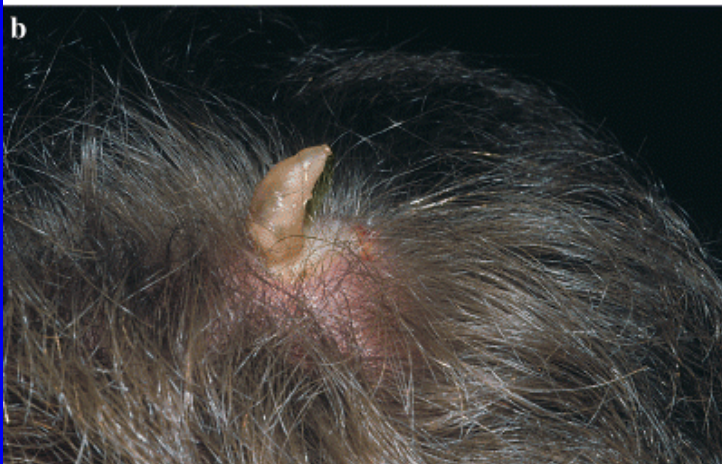


New World Myiasis



Dermatobia hominis
Human Botfly
Female glues eggs to
mosquito, stablefly, or tick





Old World Myiasis

Fly deposits eggs on
ground or clothing

Young maggots penetrate
skin

African tumbu fly

Mango fly

Mputsi fly

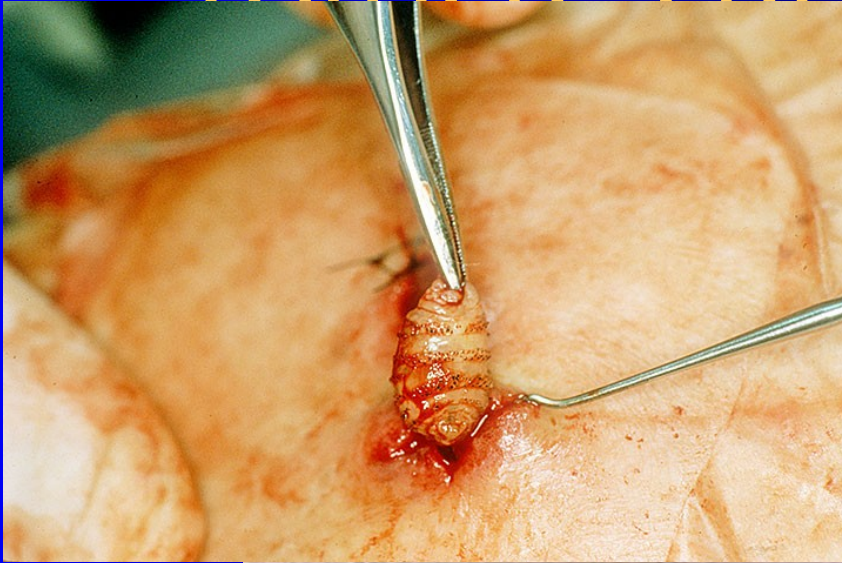


***Cordylobia
anthrophaga***



Larval Stage of Tumbu or Bot Fly

(Africa Latin America)



Cercarial Dermatitis (Swimmer's itch)



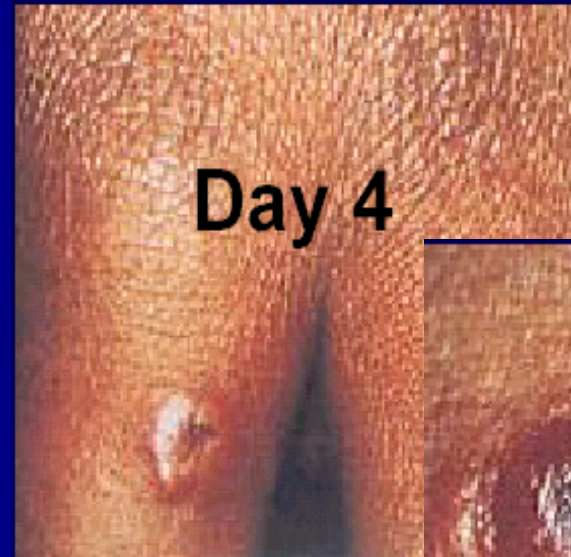
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- Transient pruritic papular or urticarial eruption on exposed skin
- Resolves in 7-10 days after fresh water snail exposures (schistosomal larvae penetrate

Cutaneous Anthrax

Clinical Progression

- Painless, pruritic papule
- Juicy papule
- Bulla (48 hours)
- Bulla ruptures/early ulcer
- Eschar with raised border
- 'Jet black' eschar
- Minimal scarring



Orf



- Ecthyma contagiosum
- Acquired from direct contact with lambs, calves, or goats
- Spontaneous resolution

Bubonic Plague

- Rural central and south Africa, central Asia, S America, SW USA
- Sudden onset flu-like syndrome
- Painful, swollen, tender lymph nodes (Buboes)



Measles (Rubeola)

- Rarely seen among vaccinated
- Major killer in developing world
- Spread by respiratory route
- Incubation period 10-14 days
- Infectious period 4-5 days



Measles

- Prodrome: high fever, malaise, URI
- Rash begins in hairline of neck/face, then moves down
- Exudative conjunctivitis
- Photophobia
- Severe bark-like cough
- Koplik's spots on buccal mucosa

- Cough, coryza, conjunctivitis, rash, & fever

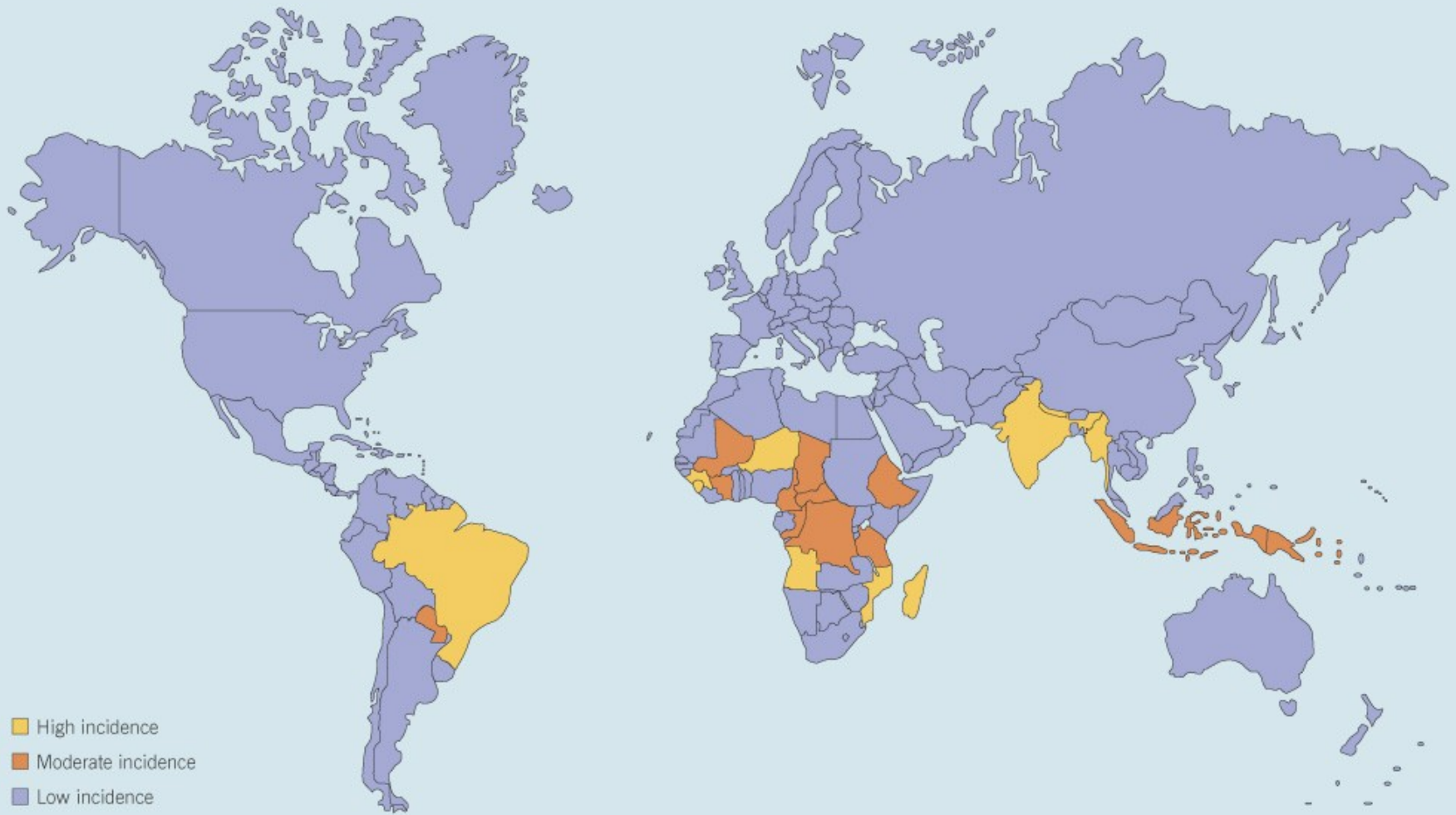


Leprosy/Hansen's Disease

- Chronic disease caused by *M. leprae*
- Peripheral nerve (sensory loss), skin, and upper airway mucosal involvement
- Asia, Caribbean, the Americas, S. Europe, Australia, Africa
- Incubation period 3 mos to 40 years



LEPROSY SITUATION IN 2000



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Sensory



Motor



Auto-amputation



Leprosy

Mycobacterium leprae



Claw-hand deformity

Lepromatous leprosy

Lepromatous Leprosy



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- Nodular infiltrations can destroy underlying structures (saddle nose deformity, leonine facies)
- Sensory loss over distal



Borderline Leprosy



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- Numerous lesions, annular
- Symmetrical nerve involvement appears later

Tuberculoid leprosy



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- Hypopigmented saucer shaped single (max 2-3)
- Numbness, pain, tingling, muscle weakness

Mycobacterium tuberculosis

- Inoculation from exogenous source (primary inoculation TB, Tuberculosis cutis verrucosa)
- Endogenous cutaneous spread (Scrofuloderma, tuberculosis cutis oroficialis)
- Hematogenous spread (Miliary TB, Lupus vulgaris)
- Tuberculids (erythema indu)



Scrofuloderma



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- Tuberculous involvement of the skin by direct extension from underlying lymphadenitis

Skin lesions in returned travellers (n=4742)

- Cut. larva migrans 9.8%
- Insect bite 8.2%
- Skin abscess 7.7%
- Infected insect bite 6.8%
- Allergic rash 5.5%
- Rash, Unknown 5.5%
- Dog bite 4.3%
- Superficial fungal 4.0%
- Dengue 3.4%
- Leishmaniasis 3.3%
- Myiasis 2.7%
- Spotted fever 1.5%
- Scabies 1.5%

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